

July 11, 2002

Hylebos NRDA Settlement Proposal Comments  
Attn: Ms. Gail Sinani  
NOAA Damage Assessment and Restoration Center NW  
7600 Sand Point Way, NE  
Seattle, WA 98115-0070  
E-Mail Address: Gail.E.Siani@noaa.gov

RE: Comments Pertaining to the Hylebos Waterway Natural Resource Damage Settlement Proposal Report (Report) and its appendices.

Dear Ms. Sinani:

Delta Environmental Consultants, Inc. (Delta) is providing comments on behalf of Weyerhaeuser Company (Weyerhaeuser) to the *Hylebos Waterway Resource Settlement Proposal Report* (Report) and its appendices. We have provided general comments to the document methodology as well as specific comments that demonstrate Weyerhaeuser's TEF facility did not meet all three criteria required to trigger allocations of SAYs for this facility.

Weyerhaeuser representatives reviewed the Report and all appendices posted on NOAA's <http://www.darcnw.noaa.gov/hylsettl.htm> website. Additionally, selected documents on NOAA's <http://www.darcnw.noaa.gov/nrda.htm> were also reviewed. These reviews focused on the scientific evidence presented in the Report and other documents and the methodologies used to determine the damages incurred in the Hylebos Waterway.

## **General Comments**

### *Sample Locations*

Sample location information is critical in evaluating how the damage settlement calculations were determined. Without the sample locations which to compare analytical data, it is impossible to determine how Exhibit H-1 was prepared and how assignments of responsibility (SAYs) were completed. The data used are from two USEPA sampling events (TetraTech Events 1A and 1B – 1994) and one NOAA sampling event (Trustee Contractor Event 1C Phase I/II – 1995 to 1996). Maps show the approximate locations for the sampling activities that took place in the spring of 1994, but none of the maps from previous sampling activities (those conducted by TetraTech) were in the documentation posted on either website.

Maps in Appendix I to Appendix H show details of areas impacted with COCs. However, none of the included maps included the actual sample locations used by the Trustees to determine the areas of impact shown on these maps

### *Analytical Methods*

There is no mention of the USEPA approved analytical methodologies that were used. None of the documentation lists the QA/QC standards or the SW-846 methodologies followed when collecting the samples and conducting laboratory analyses, nor is the use of equipment and trip blanks, and other QA/QC procedures discussed.

### *Artificial "Adjustment" of Results*

Data collected by TetraTech was modified by "adjusting" results based on analyses of samples collected during the 1994 Trustee sampling event. Most of the analyses from the 1994 Trustee event were conducted at NOAA's laboratory, and the analytical results for contaminants of concern (COCs) in these samples were higher than those presented in the TetraTech reports (80%) of the time. On this basis, the TetraTech data was statistically altered (raised) to reflect the analyses of the 28 samples collected in the spring of 1994, rather than using actual results from TetraTech.

Statistics were used to interpolate data and it appears that some sort of statistical manipulations were used to modified actual data to determine "fate and transport" from individual sample locations.

It is possible that TetraTech did not use Total Acid Digestion (TAD) analytical methodologies that were used by the Trustees to determine the levels of COCs in the sediment. The analytical data generated by NOAA's laboratory showed that samples extracted with strong acid had lower levels of reportable COCs than those that had been extracted with TAD. Also, TAD analyses of samples are not representative of the COCs that would actually be present for bioaccumulation in the Lower Hylebos Waterway sediments.

### *Age of Data*

Data used in the Report was generated at least eight years ago and conditions in the Waterway (especially sediment distribution) have changed due to tidal influx, ship scour, input from Hylebos Creek, dredging, and remediation activities. The data presented in the Report is therefore dated and it is doubtful that the historic data can be correlated to current conditions and COC distributions in the Waterway.

### *COC Speciation*

The analytical data for the samples does not list the specific COCs being considered. For example, Chromium is reported as chromium, however, there is no consideration of the valence state (hexavalent or trivalent). There are 19 different compounds listed for the PAH category, however, only a few of these compounds has been determined to have any significant health affects (*The Merck Index*, 12<sup>th</sup> Edition, Whitehouse Station, NJ: Merck, 1996, Budavari, Susan.)

### **Specific COCs and SAYs Assigned to Weyerhaeuser**

Attachment 1 of the Report allocates 14.688 Discounted Service Acre Years (DSAYs) for the Weyerhaeuser site based on "triggers" for PAH, chromium, MDCB (1,3 dichlorobenzene). Attachment 2 of the Report lists the "Allocations Sites and Associated Parties". In Attachment 2, Weyerhaeuser is listed as being associated with Kaiser Aluminum & Chemical Corp. - Kaiser (Map Segment 1, Site #10. Kaiser had an easement to the "Kaiser Ditch" which is a

confirmed source of PAHs to the waterway. Kaiser was required to dredge the ditch to remove impacted sediments in 1990 per an order from the Washington State Department of Ecology. However, even after these activities were conducted, high levels of PAHs remain in the ditch. Kaiser and Weyerhaeuser do not have common ownership interests along the waterway.

According to the report, there are three criteria that must be met before triggering an allocation of natural resource damages to a site. These criteria are:

- Pathway – There must be a pathway for process water, surface water, ground water, or sediment to travel from the site to the Hylebos Waterway.
- Activity – Activities must have been conducted at the site that would create a likely source of COC or which resulted in the release of a chemical likely to exacerbate the impact of COC.
- Evidence of Contamination –
  1. NPDES violations
  2. Surface water contamination
  3. Ground water contamination
  4. Soil or sediment contamination
  5. Sediment “footprint” in very close proximity to site.

The document specifically states: “Do not proceed unless the answers to 1 and 2 are YES, and the answer to 3a, b, c, d, or e is Yes”.

### **Evaluation of Trigger Criteria**

Delta will address the three trigger criteria for each COC where allocation of damages has been assigned to Weyerhaeuser.

#### **PAHs**

Certain materials associated with Weyerhaeuser operations may contain PAHs, primarily in the form of hydraulic fluids, motor oils, and fuel used by the equipment on the site. PAHs are also present on the site in the form of particulate matter deposited from Kaiser operations. The Report and appendices attribute PAH releases from Weyerhaeuser to the Hylebos Waterway to vehicle washing and a leaking underground storage tank.

#### Trigger Criteria for PAHs

##### *Pathway*

Based on the studies conducted by Dalton, Olmstead, and Fugelvand, Inc. the diesel fuel released from the UST did not migrate to the Waterway. The leaky diesel UST was closed in place in 1991, and an oil skimmer and groundwater recovery system was operated until January 1992 when groundwater monitoring results indicated diesel concentrations no longer exceeded Ecology cleanup levels (Dalton, Olmsted & Fugelvand, Inc., February 24, 1992).

Prior to adding a new vehicle wash area in 1986, the vehicle wash water is reported to have percolated into the ground. After the vehicle wash area was constructed, the effluent from this area is sent to an oil/water separator to remove oils and greases and is then discharged to

the sanitary sewer (under a POTW permit), not the Waterway. The oil collected in the oil/water separator is placed in a 300 gallon above ground tank. The oil in the tank is pumped to a tanker truck for recycling.

#### *Activity*

Prior to 1986, all truck and equipment wash water was discharged to the ground. The wash water ran off the blacktop along the railroad track and into the yard where it percolated into the soil. In 1986, Weyerhaeuser constructed an equipment wash area that included a sediment catch basin and an oil/water separator.

The water collected in the oil water separator. Any hydrocarbons collected in this unit are transferred to a 300-gallon tank, which is emptied periodically by an offsite recycler. The water is then discharged to the City of Tacoma sanitary sewer (Delta, February 25, 2000). No wastewater is discharged from the storm water collection system to the Kaiser Ditch.

Since 1991, diesel fuel has been delivered to the TEF facility by an outside vender approximately two times per day. The only diesel fuel stored on TEF property is a trailer-mounted, 500-gallon steel storage tank used to fuel equipment in the log sort yard. The tank is equipped with secondary spill containment.

#### *Evidence of Contamination*

There are two primary types of PAHs typically found in coastal sediments. These PAHs are derived predominantly from two different anthropogenic sources (e.g., combusted/pyrolyzed fossil fuel vs. spilled petroleum; aka "pyrogenic" vs. "petrogenic". Weyerhaeuser retained Battelle, Arthur D. Little, and Delta to conduct studies to determine the source of the PAHs in the Waterway and Kaiser Ditch in the vicinity of Weyerhaeuser. Weyerhaeuser gave draft copies of the report data generated by Battelle to NOAA and Battelle/Weyerhaeuser gave a presentation on the reports findings to various agencies, including the Trustees.

Kaiser is responsible for the PAH COCs found in the Kaiser Ditch and the Waterway. Reports by Battelle and others indicate that the Kaiser facility is responsible for millions of pounds of PAHs that have been introduced to the Waterway via the Kaiser Ditch. These studies also confirmed that Kaiser was a source of particulate emissions of PAHs that impacted the surrounding properties and the Waterway.

The Weyerhaeuser facility operations would not account for any quantity of PAH COCs to the Waterway because there is no path or source for this COC from the Weyerhaeuser TEF facility to the Waterway.

#### **1,3 Dichlorobenzene (DCB)**

The Trustee documentation attributes the presence of 1,3 dichlorobenzene (1,3 DCB) to the TEF site. However, 1,3 dichlorobenzene is not commercially available and is believed to be a contaminant in 1,2 and 1,4 dichlorobenzene isomers. Since neither the 1,2 or 1,4 isomers were detected anywhere near the Weyerhaeuser site (they would higher in concentration than the 1,3 isomer), the detection of this isomer in the sediments is probably due to laboratory error. (Ref.: Handbook of Toxic and Hazardous Chemicals and Carcinogens, Second Edition, Marshall Sittig, 1985.)

Trigger Criteria for 1,3 DCB

1. *Pathway* – This criteria is not applicable as 1,3 DCB has never been used at the TEF facility, there cannot be a pathway, other than migration of sediments from another source with known 1,2 and/or 1,4 TCB contamination
2. *Activity* – As previously stated the TEF facility never used 1,3 DCB and this isomer is not commercially available. It has been recognized to be a minor contaminant of the 1,2 and 1,4 DCB isomers. Based on the footnote on page 59 of Appendix H the entire allocation of 1,3 DCB is assigned to Elf Atochem because they have a history of 1,2 and 1,4 TCB use and “footprints” adjacent to their site.
3. *Evidence of contamination* – As the answer to “2” above is no, this criteria is not applicable.

**Chromium**

There is no known source for chromium on the TEF site. Since the valence state of the chromium is not listed it is difficult to ascertain the source and since sample location maps were not provided with the Report or appendices, the location of the sample showing elevated levels of chromium cannot be correlated to trace potential sources.

Trigger criteria for Chromium

1. *Pathway* – Since soluble chromium compounds are not used at the TEF facility there would be no pathway.
2. *Activity* – The TEF facility did not conduct any activities that used soluble chromium compounds.
3. *Evidence of contamination* – there is no evidence of soluble chromium being released on the TEF site.

Based on the criteria for establishing a “trigger” for the NRDA damage assignments, none of the COCs attributed to the Weyerhaeuser TEF facility listed in the Report meet all of the three criteria required to trigger SAY liabilities for the TEF facility.

Sincerely,

**Delta Environmental Consultants, Inc.**

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